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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/627,248	07/28/2000	Donnie V. Savage	CISCP541	2370
26541	7590	10/28/2004	EXAMINER	
RITTER, LANG & KAPLAN 12930 SARATOGA AE. SUITE D1 SARATOGA, CA 95070			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/627,248	Applicant(s) SAVAGE, DONNIE V.	
	Examiner Joshua Kading	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 26-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

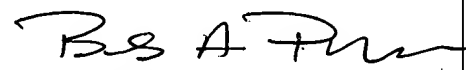
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

  
**BOB PHUNKULH**  
**PRIMARY EXAMINER**    10/26/04

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

5

### ***Claim Objections***

Claims 26-30 are objected to because of the following informalities:

Claims 26-30 at line 4 of all claims states "limiting the amount". Since there is no antecedent basis for "the amount" it is suggested that line 4 of claims 26-30 be changed to --limiting an amount--. Appropriate correction is required.

10

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

15

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20

Claims 1, 2, 4, 6-13, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al. (U.S. Patent 5,394,436) in view of Natarajan (U.S. Patent 5,581,543).

25

Regarding claim 19, Meier ('436) discloses "...an information packet received from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise (col. 3, lines 65-col. 4, lines 1-2 and 9-19 where the HELLO packet is the information packet which identifies the sender  
5 as a stub router by indicating its type and that it is 0 hops from itself)..."

However, Meier ('436) lacks what Natarajan discloses, "a computer program product for determining route redistribution at a device within a network, the product comprising (col. 3, lines 9-14)...code that prepares query packets requesting route information only to neighboring devices that have not been identified as stub routers  
10 upon receiving notice of a failed connection (col. 9, lines 65-col. 10, lines 1-18 where the process of evaluating the different switching nodes requires messages (queries) to be sent back and forth between nodes to derive the necessary information, further this is only done with the switching nodes, which as seen in figure 1 are only nodes contained in element 30, gateway 22 (the stub router) is not part of this process as  
15 described); and a computer-readable storage medium for storing the codes (col. 3, lines 9-14)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the computer code and querying of nodes after notice of a failure for the purpose of regenerating routes of the network. The motivation for regenerating  
20 routes in a network because of a failure is to avoid the failure and thus keep communication flowing.

Although claim 1 is a method claim and claim 21 is an apparatus claim, they both have limitations similar to those of claim 19. Therefore, claims 1 and 21 are rejected for the same reasons and motivation as in claim 19.

5           Regarding claim 20, Meier ('436) and Natarajan disclose the computer program of claim 19. However, Meier ('436) lacks what Natarajan further discloses, "the computer readable medium is selected from the group consisting of...system memory (col. 3, lines 11-14)..." It would have been obvious to one with ordinary skill in the art to include the system memory for storing the program for the same reasons and  
10          motivation as in claim 19.

          Regarding claim 2, Meier ('436) and Natarajan disclose the method of claim 1. However, Natarajan lacks what Meier ('436) further discloses, "wherein receiving an information packet comprises receiving a hello packet containing peer information (col.  
15       3, lines 65-col. 4, lines 1-2 and 9-19)." It would have been obvious to one with ordinary skill in the art to include the hello packet for the same reasons and motivation as in claim 1.

          Regarding claim 4, Meier ('436) and Natarajan disclose the method of claim 1.  
20       However, Meier ('436) lacks what Natarajan further discloses "the network has a hub and spoke arrangement and the device is a hub and the stub router (figure 1, where, for example, element 37 is the device which represents a hub with spokes 34, 38, and the

gateway (stub router)).” It would have been obvious to one with ordinary skill in the art to include the hub and spoke arrangement for the same reasons and motivation as in claim 1.

5           Regarding claims 6, 7, and 8, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan do not explicitly disclose the advertised routes are “connected routes (claim 6)”, “summary routes (claim 7)”, or “static routes (claim 8)”. Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have any  
10   three routes (connected, summary, or static) advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent upon the designer of the system. The motivation for choosing the type of route is a preference of the designer and one route type obviously holds no distinct advantage over the others, as applicant has included all three in the dependent claims.

15

          Regarding claim 9, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) lacks what Natarajan discloses, “wherein the device and the neighboring devices have point-to-point links (figure 1, the elements in element 30).” It would have been obvious to one with ordinary skill in the art to include the point-to-point  
20   links for the same reasons and motivation as in claim 1.

Regarding claim 10, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan do not explicitly disclose "wherein the device and the neighboring devices have multipoint links." Although the multipoint links are not disclosed in either Meier ('436) or Natarajan, it would have been obvious to one with  
5 ordinary skill in the art at the time of invention to have multipoint links as a matter of design choice. As seen in figure 1 of Natarajan, the network operates using point-to-point links. However, one of ordinary skill in the art would recognize that a multipoint network could also be used as the network. The motivation for choosing between a point-to-point network and multipoint network is a preference of the designer and the  
10 system design.

Regarding claim 11, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) lacks what Natarajan discloses, "wherein only one neighboring device is a stub router (figure 1, device 37 has only one neighbor that is a stub router,  
15 i.e. gateway 22)." It would have been obvious to one with ordinary skill in the art to include the only one stub router neighboring the device for the same reasons and motivation as in claim 1.

Regarding claim 12, Meier ('436) and Natarajan disclose the method of claim 1.  
20 However, Meier ('436) and Natarajan do not explicitly disclose "wherein multiple neighboring devices are stub routers." Although neither Meier ('436) nor Natarajan disclose the multiple neighbors as stub routers, Natarajan does suggest that element 28

can also act as a gateway (col. 2, lines 51-52). This means, for example, if figure 1, element 30 had only one switching node, then the device (the switching node) would have multiple stub routers connected to it. It would have been obvious to one with ordinary skill in the art to see that this scenario is possible and that there would  
5 therefore be multiple stub routers connected to the devices of the network. The motivation for having multiple stub routers is again a designer preference and a function of the network.

Regarding claim 13, Meier ('436) and Natarajan disclose the method of claim 1.  
10 However, Meier ('436) lacks what Natarajan discloses, "wherein the device is a router (figure 1, any element node in figure 30 acts as a routing device as suggested by the multiple paths of each node, thus implying that the node must route the data out the appropriate path)." It would have been obvious to one with ordinary skill in the art to have the device consist of a router for the same reasons and motivation as in claim 1.

15  
Claims 14, 15, 17, 22-24, 26-30, 32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (U.S. Patent 5,673,031) in view of Natarajan.

Regarding claim 23, Meier ('031) discloses "...information received at a router  
20 which identifies the router as a stub router (col. 12, lines 35-42 where the administrator informs the router that it is the root node or stub router); an information packet to be sent from the stub router to neighboring devices, the information packet identifying the



source as a stub router and specifying route types that the stub router will advertise (col. 13, lines 23-42 where the HELLO packet is the information packet which identifies the sender as a stub router by indicating its type through the source address)..."

5        However, Meier ('031) lacks what Natarajan discloses, "a computer program  
product for reducing query regenerations for route distribution within a network (col. 3, lines 9-14)...code that prepares a response packet to be sent with routes identified as  
inaccessible upon receiving a query for route information other than the type specified in  
the information packet (col. 9, lines 65-col. 10, lines 1-18 where the process of  
evaluating the different switching nodes requires messages (queries) to be sent back  
10    and forth between nodes to derive the necessary information, further this is only done  
with the switching nodes, which as seen in figure 1 are only nodes contained in element  
30, gateway 22 (the stub router) is not part of this process as described); and a  
computer-readable storage medium for storing the codes (col. 3, lines 9-14)."

15        It would have been obvious to one with ordinary skill in the art at the time of  
invention to include the computer code and querying of nodes after notice of a failure for  
the purpose of regenerating routes of the network. The motivation for regenerating  
routes in a network because of a failure is to avoid the failure and thus keep  
communication flowing.

20        Although claim 14 is a method claim and claims 22 and 24 are apparatus claims,  
they all have limitations similar to those of claim 23. Therefore, claims 14, 22, and 24  
are rejected for the same reasons and motivation as in claim 23.

Regarding claims 15 and 32, Meier ('031) and Natarajan disclose the method of claim 14 and the system of claim 22. However, Meier ('031) lacks what Natarajan further discloses "the network has a hub and spoke arrangement and the device is a hub and the stub router (figure 1, where, for example, element 37 is the device which represents a hub with spokes 34, 38, and the gateway (stub router))." It would have been obvious to one with ordinary skill in the art to include the hub and spoke arrangement for the same reasons and motivation as in claims 14 and 22.

Regarding claims 17 and 36, Meier ('031) and Natarajan disclose the method of claim 14 and the system of claim 22. However, Natarajan lacks what Meier ('031) further discloses, "wherein sending an information packet comprises transmitting a hello packet (col. 13, lines 23-42)." It would have been obvious to one with ordinary skill in the art to include the hello packet for the same reasons and motivation as in claims 14 and 22.

Regarding claim 34, Meier ('031) and Natarajan disclose the system of claim 22. However, Meier ('436) and Natarajan do not explicitly disclose the advertised routes are "connected routes". Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have connected routes advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent upon the designer of the system. The

motivation for choosing the type of route is a preference of the designer and dependent on the system.

Regarding claims 26, 27, 28, 29, and 30, Meier ('031) discloses "a computer-  
5 implemented method for route redistribution within a network, the method comprising:  
receiving information at a router identifying the router as a stub router (col. 12, lines 35-  
42 where the administrator informs the router that it is the root node or stub router)..."

However, Meier ('031) lacks what Natarajan discloses, "limiting an amount of  
route information sent by the stub router to a neighboring device in response to a query  
10 for route information (figure 9, element 116 whereby creating a shortest path definition  
that does not include the failed link, Natarajan has limited an amount of route  
information sent by the stub router to neighboring devices)..."

It would have been obvious to one with ordinary skill in the art at the time of  
invention to include the computer code and querying of nodes after notice of a failure for  
15 the purpose of regenerating routes of the network. The motivation for regenerating  
routes in a network because of a failure is to avoid the failure and thus keep  
communication flowing.

It is further noted that Meier ('031) and Natarajan also do not explicitly disclose  
"...wherein the limiting the route information sent by the stub router comprises limiting  
20 the route information to..." "only connected routes (claim 26)", "only summary routes  
(claim 27)", "only static routes (claim 28)", "only internal routes (claim 29)", or "only  
external routes (claim 30)".

Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have any of the five routes (connected, summary, static, internal, or external) advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent  
5 upon the designer of the system. The motivation for choosing the type of route is a preference of the designer and one route type obviously holds no distinct advantage over the others, as applicant has included all three in the dependent claims.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier  
10 ('436) and Natarajan as applied to claim 1 above, and further in view of applicant's admitted prior art (AAPA).

Regarding claim 3, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan lack what AAPA discloses, "wherein the device and stub router are configured for EIGRP (specification, page 2, lines 9-20 where it is  
15 strongly suggested that gateways (stub routers) as well as other devices (namely routers) can be configured for EIGRP)." It would have been obvious to one with ordinary skill in the art at the time of invention to have the stub router and device configured for EIGRP for the purpose of providing a way to update routes of a network with information from only neighboring nodes required. The motivation for updating routes of a network  
20 with neighboring node information only is to save resources by not updating the entire network.

Claims 18 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier ('031) and Natarajan as applied to claims 14 and 22 above, and further in view of applicant's admitted prior art (AAPA).

Regarding claims 18 and 31, Meier ('031) and Natarajan disclose the method of claim 14 and the system of claim 22. However, Meier ('031) and Natarajan lack what AAPA discloses, "wherein the device and stub router are configured for EIGRP (specification, page 2, lines 9-20 where it is strongly suggested that gateways (stub routers) as well as other devices (namely routers) can be configured for EIGRP)." It would have been obvious to one with ordinary skill in the art at the time of invention to have the stub router and device configured for EIGRP for the purpose of providing a way to update routes of a network with information from only neighboring nodes required. The motivation for updating routes of a network with neighboring node information only is to save resources by not updating the entire network.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier ('436) and Natarajan as applied to claim 1 above, and further in view of Shrader (U.S. Patent 5,864,666).

Regarding claim 5, Meier ('436) and Natarajan disclose the method of claim 1. However, Meier ('436) and Natarajan lack what Shrader discloses, "where the network includes a dual homed host (figure 2, element 100 as described in col. 4, lines 30-37)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the dual home host configuration as in Shrader for the purpose of providing a

way to connect two networks (or other devices for that matter) and provide a firewall.

The motivation for providing a firewall between two networks or devices is so that there is relative security between the networks or devices.

5           Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier ('031) and Natarajan as applied to claims 14 and 22 above, and further in view of Shrader (U.S. Patent 5,864,666).

          Regarding claims 33 and 35, Meier ('031) and Natarajan disclose the method of claim 14 and the system of claim 22. However, Meier ('031) and Natarajan lack what  
10   Shrader discloses, "where the network includes a dual homed host (figure 2, element 100 as described in col. 4, lines 30-37)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the dual home host configuration as in Shrader for the purpose of providing a way to connect two networks (or other devices such as any router for that matter) and provide a firewall. The  
15   motivation for providing a firewall between two networks or devices is so that there is relative security between the networks or devices.

          Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-  
20   3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

          If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

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10

  
Joshua Kading  
Examiner  
Art Unit 2661

October 20, 2004

  
BOB PHUNKULH  
PRIMARY EXAMINER 10/20/04